



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

FEB 25 2019

Mr. Thomas Frick  
Director  
Division of Environmental Assessment & Restoration  
Florida Department of Environmental Protection  
Mail Station 3000  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dear Mr. Frick:

The U.S. Environmental Protection Agency has completed its review of the document titled *Nutrient TMDLs for Lake Alfred (WBID<sup>1</sup> 1488D), Lake Blue (WBID 1521O), and Lake Marianna (WBID 1521L)*. The Florida Department of Environmental Protection (FDEP) submitted the Lake Alfred, Lake Blue, and Lake Marianna Total Maximum Daily Load (TMDL) and revised Chapter 62-304, Florida Administrative Code (F.A.C.),<sup>2</sup> including the numeric nutrient criteria (NNC) for the subject waters, in a letter to the EPA dated October 9, 2018, as TMDLs and new or revised water quality standards (WQS) with the necessary supporting documentation and certification by FDEP General Counsel, pursuant to Title 40 of the Code of Federal Regulations part 131.

The NNC were adopted under Chapter 62-304.625(20)-(22) as site-specific numeric interpretations of paragraph 62-302.530(48)(b). As referenced in paragraph 62-302.531(2)(a), the FDEP intends for the submitted NNC to serve in place of the otherwise applicable criteria for lakes set out in paragraph 62-302.531(2)(b). The total nitrogen (TN) and total phosphorus (TP) TMDLs for Lake Alfred, Lake Blue, and Lake Marianna would also constitute a site-specific numeric interpretation of the narrative nutrient criterion set forth in paragraph 62-302.530(48)(b), for these water segments.

The FDEP submitted the Lake Alfred, Lake Blue, and Lake Marianna TMDLs to the EPA for review pursuant to both Clean Water Act (CWA) sections 303(c) and 303(d) since the TMDLs will also act as a Hierarchy 1 (H1) site-specific interpretation of the State's narrative nutrient criterion pursuant to 62-302.531(2)(a)1.a. The EPA acknowledges that by virtue of establishing the TMDLs in Chapter 62-304, the FDEP is also establishing an H1 interpretation of the narrative nutrient criteria for these waterbodies as new or revised WQS. The enclosed, combined WQS and TMDL decision document summarizes the EPA's review and approval of the WQS and TMDLs.

<sup>1</sup> WBID refers to **waterbody identification**

<sup>2</sup> Unless otherwise stated, all rule and subsection citations are to provisions in the Florida Administrative Code.

In accordance with sections 303(c) and (d) of the CWA, I am hereby approving the TMDLs promulgated in Chapter 62-304 for Lake Alfred, Lake Blue, and Lake Marianna as both TMDLs and as revised WQS for TN and TP. Any other criteria applicable to these waterbodies remain in effect, especially those related to chlorophyll *a* and in paragraph 62-302.531(2)(b). The requirements of paragraph 62-302.530(48)(a) also remain applicable. The TMDL for Lake Alfred (WBID 1488D) supersedes the existing Lake Alfred nutrients TMDL, which was established by the EPA on August 23, 2010.

If you have any comments or questions relating to the approval of the H1 WQS or TMDLs, please contact me at (404) 562-9345, or have a member of your staff contact Dr. Katherine Snyder in the WQS program at (404) 562-9840 or Ms. Laila Hudda of the TMDL program at (404) 562-9007.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Gettle', written over the word 'Sincerely,'.

Jeaneanne M. Gettle  
Director  
Water Protection Division

A handwritten signature in blue ink, appearing to read 'J. Gettle', written below the typed name.

Enclosure

cc: Mr. Kenneth Hayman, FDEP  
Mr. Daryll Joyner, FDEP  
Ms. Erin Rasnake, FDEP

# **Florida Numeric Interpretation of the Narrative Nutrient Water Quality Criterion Through Total Maximum Daily Loads (TMDLs) to Establish a Hierarchy 1 (H1): Joint Water Quality Standards (WQS) and TMDL Decision Document**

**H1:** Nutrient TMDLs for Lake Alfred (waterbody identification (WBID) 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)

**ATTAINS TMDL ID:** FL68605

**Location:** Polk County, Florida

**Status:** Final

**Criteria Parameter(s):** The Lake Alfred (WBID 1488D) criteria for total nitrogen (TN) is 1.69 mg/L and total phosphorus (TP) is 0.03 mg/L, both expressed as an annual geometric mean (AGM) not to be exceeded in any year. The TMDL allocation for WBID 1488D is expressed as a percent reduction of 16% for TN and 0% for TP.

The Lake Blue (WBID 1521Q) criteria for TN is 1.16 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521Q is expressed as a percent reduction of 66% for TN and 67% for TP.

The Lake Marianna (WBID 1521L) criteria for TN is 1.00 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521L is expressed as a percent reduction of 44% for TN and 0% for TP.

**Impairment/Pollutant:** Three waterbodies (see next page) in the Peace River Basin are not meeting water quality criteria for nutrients and not supporting the designated uses of Class III Freshwater (fish consumption; recreation; and propagation and maintenance of a healthy, well-balanced population of fish and wildlife). An H1 was submitted by the Florida Department of Environmental Protection (FDEP) that establishes site-specific numeric interpretation of the narrative nutrient criteria for TN and TP and provides loads to address the impairment.

**Background:** The FDEP submitted the final H1 for the *Nutrient TMDLs for Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)* (the “report”) by letter dated October 9, 2018. The draft report for Lake Alfred, Lake Blue, and Lake Marianna is dated January 2018 and was received February 7, 2018. The final report dated August 2018 includes H1 site-specific concentrations and percent reductions. A final report was received on October 17, 2018.

The submission included:

- Submittal letter
- Nutrient TMDLs for Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L) and Documentation in Support of the Development of Site-Specific Numeric Interpretations of the Narrative Nutrient Criterion
- Documents related to Public Workshop
- Documents related to Public Hearing



## **EPA HIERARCHY 1 REVIEW DOCUMENT**

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

- Documents related to Public Notice for Rulemaking and Rule Adoption
- Public Comments Received and Response

This document explains how the submission meets the Clean Water Act (CWA) statutory requirements for the approval of WQS under section 303(c) and of TMDLs under section 303(d), and the EPA's implementing regulations in Title 40 of the Code of Federal Regulations (40 CFR) parts 131 and 130, respectively.

**REVIEWERS:** WQS: Katherine Snyder, WQS Coordinator, [snyder.katherine@epa.gov](mailto:snyder.katherine@epa.gov)  
TMDL: Laila Hudda, ALTS Coordinator, [hudda.laila@epa.gov](mailto:hudda.laila@epa.gov)

### **Waterbodies addressed in this H1 Approval Action:**

<b>Lake Alfred</b>	<b>WBID 1488D</b>	<b>726 acres</b>
<b>Lake Blue</b>	<b>WBID 1521Q</b>	<b>53 acres</b>
<b>Lake Marianna</b> (previously named Lake Sanitary)	<b>WBID 1521L</b>	<b>508 acres</b>

# EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

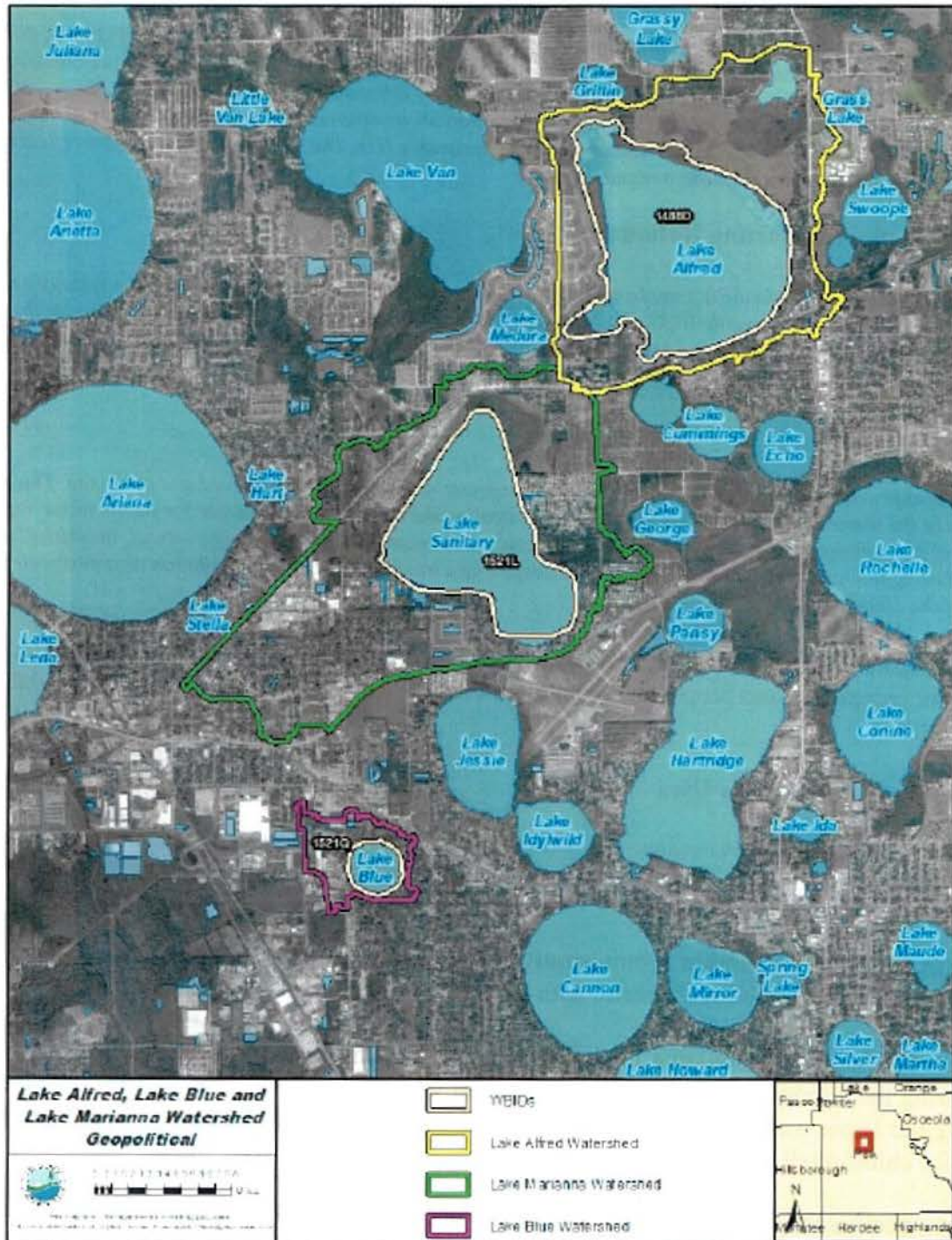


Figure 1. Lake Alfred (WBID 1488D), Lake Marianna (shown as Lake Sanitary) (WBID 1521L), and Lake Blue (WBID 1521Q) Watersheds



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

*This document contains the EPA's review of the above-referenced H1. This review document includes WQS and TMDL review guidelines that state or summarize currently effective statutory and regulatory requirements applicable to this approval action. Review guidelines are not themselves regulations. Any differences between review guidelines and the EPA's implementing regulations should be resolved in favor of the regulations themselves. The italicized sections of this document describe the EPA's statutory and regulatory requirements for approvable H1s. The sections in regular type reflect the EPA's analysis of the state's compliance with these requirements.*

### I. WQS Decision – Supporting Rationale

*Section 303(c) of the CWA and the EPA's implementing regulations at 40 CFR section 131 describe the statutory and regulatory requirements for approvable WQS. Set out below are the requirements for WQS submissions, under the CWA and the regulations. The information identified below is necessary for the EPA to determine if a submitted WQS meets the requirements of the CWA and, therefore, may be approved by the EPA.*

#### 1. Use Designations

*Section 131.10(a) provides that each state must specify appropriate water uses to be achieved and protected. The classification of the waters of the state must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. In no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the United States.*

**Assessment:** Lake Alfred, Lake Blue, and Lake Marianna are classified as Class III Freshwater (fish consumption; recreation; and propagation and maintenance of a healthy, well-balanced population of fish and wildlife).

#### 2. Protection of Downstream Uses

*Section 131.10(b) provides that in designating uses of a waterbody and the appropriate criteria for those uses, the state shall take into consideration the WQS of downstream waters and shall ensure that its WQS provide for the attainment and maintenance of the WQS of downstream waters.*

Rule 62-302.531(4) of the Florida Administrative Code (F.A.C.) requires that downstream uses be protected. Lake Alfred is a closed system, with no connection to downstream surface waters.

Lake Marianna discharges into Lake Jessie (WBID 1521K), which is part of the Winter Haven Chain of Lakes. During the Group 3, Cycle 3 assessment period when Lake Marianna was listed as impaired for nutrients, Lake Jessie was delisted as category 4A (TMDLs developed) for TP, but was assessed as impaired for chlorophyll *a* (Chl*a*) and TN.

To evaluate whether the Lake Marianna TMDL is protective of Lake Jessie, the FDEP conducted a simple regression analysis of the relationship between the TN AGMs (1999 – 2016) in Lake Marianna and those in Lake Jessie (Figure 3.1). This analysis suggests that flow from the Lake Marianna has an influence on the water quality in Lake Jessie ( $R^2 = 0.4288$ , and  $p = 0.0043$ ). When the TN target (1.00 mg/L) for Lake Marianna is applied to the regression equation, the resulting TN concentration in Lake Jessie is 0.94 mg/L. The FDEP then developed a multiple regression analysis of data within Lake Jessie from 1999 to 2016 to establish a predictive relationship for lake Chl*a*, with TN and TP as the independent variables (Appendix D). The equation indicates a TN AGM of 0.94 mg/L and a TP AGM of 0.03 mg/L (the target TP concentration allowed under the Lake Marianna TMDL) will achieve the

## EPA HIERARCHY 1 REVIEW DOCUMENT

### Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/ Peace River Basin – Nutrients

applicable Chl $a$  criterion of 20  $\mu\text{g/L}$  in Lake Jessie. Therefore, the Lake Marianna TMDL will be protective of water quality in Lake Jessie.

Lake Blue discharges into Lake Cannon (WBID 1521H) through a gated control structure when seasonal high waters exceed the lake operational levels. During the Cycle 3 (Group 3) assessment period when Lake Blue was listed as impaired for nutrients, Lake Cannon was delisted as category 4A (TMDLs developed) for TP, but was assessed as impaired for Chl $a$  and TN.

There are two pieces of evidence indicating that the Lake Blue has minimal impacts on Lake Cannon. First, according to the Winter Haven Chain of Lakes Water Quality Management Plan prepared by PBS&J (2010)<sup>1</sup>, “Due to the hydrologic isolation of Lake Blue from the Southern Chain by a gated structure, improvements in water quality of the lake would result in little benefit farther downstream.” Second, the FDEP conducted a simple regression analyses of the relationships between the TN and TP AGMs (1999 – 2015) in Lake Blue and those in Lake Cannon. The low  $R^2$  and high p-values of these analyses suggest that flow from the Lake Blue has very little or no influence on the water quality in Lake Cannon. This supports the hydrologic isolation between these two lakes. Therefore, the Lake Blue TMDL will be protective of water quality in Lake Cannon.

**Assessment:** The H1 is providing use protection for the downstream waters.

### 3. Water Quality Criteria

*Section 131.11(a) provides that states must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.*

The FDEP used the Trophic Status Index (TSI) to determine that Lake Alfred, Lake Blue, and Lake Marianna were impaired for nutrients for the verified period in 2009 (Group 3, Cycle 2). The subsequent assessment in 2015 (Group 3, Cycle 3) indicated that the numeric nutrient criteria (NNC) were also not being met for Chl $a$  in all three lakes and for TP in Lake Blue. To establish the nutrient targets for Lake Alfred, Lake Blue, and Lake Marianna, the FDEP used the generally applicable 20  $\mu\text{g/L}$  Chl $a$  criterion as a target because this level is considered protective of the designated use of these low color, high alkalinity lakes. See 62-302.531(2)(b), F.A.C.

In order to determine site-specific TN and TP targets for the TMDLs, the FDEP used a regression approach to relate lake TN and/or TP loads to AGM Chl $a$  levels (page 30 of the report). The data used for the regression models were from Polk County sampling locations near the center of each lake from 1999-2016. The regression equations for each lake that explain the relationship between AGM Chl $a$  and TN were used to identify a TN of 1.69 mg/L for Lake Alfred, 1.00 mg/L for Lake Marianna, and 1.16 mg/L for Lake Blue, which would result in a Chl $a$  target of 20  $\mu\text{g/L}$ .

The TP water quality target was derived using predisturbance inferred water quality from paleolimnological studies conducted in lakes located in the area of Lakes Alfred, Marianna, and Blue.

---

<sup>1</sup> PBS&J. 2010. Winter Haven Chain of Lakes Water Quality Management Plan. Prepared for the City of Winter Haven, Tampa, FL.



## EPA HIERARCHY 1 REVIEW DOCUMENT

### Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/ Peace River Basin – Nutrients

The median value of the TP paleolimnological results is 0.03 mg/L (page 52 of the report). For Lake Alfred and Lake Marianna in Tables 2.2 and 2.3 of the report, the TP AGMs did not exceed the generally applicable NNC target of 0.03 mg/L in any year for Lake Alfred and only once, in 2003, for Lake Marianna. Thus, the site-specific TP criteria for Lake Alfred and Lake Marianna is the same as the lower end of the range of the generally applicable NNC values, which is 0.03 mg/L for low color, high alkalinity lakes.

For Lake Blue, the approach to establish nutrient targets used paleolimnological data for TP and a regression approach for TN. A multiple regression model relating TN and TP concentrations to Chla in Lake Blue shows that the selected nutrient targets can achieve the Chla criteria of 20 µg/L (page 53 of the report).

By utilizing the regression approaches listed above, the FDEP established nutrient concentrations that attain the existing Chla criterion. The developed TMDLs are the site-specific numeric interpretations of the narrative nutrient criterion for Lake Alfred, Lake Blue, and Lake Marianna.

**Assessment:** The site-specific nutrient criteria for Lake Alfred (WBID 1488D) for TN is 1.69 mg/L and total TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1488D is expressed as a percent reduction of 16% for TN and 0% for TP.

The site-specific Lake Blue (WBID 1521Q) criteria for TN is 1.16 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521Q is expressed as a percent reduction of 66% for TN and 67% for TP.

The site-specific Lake Marianna (WBID 1521L) criteria for TN is 1.00 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521L is expressed as a percent reduction of 44% for TN and 0% for TP.

The resulting water quality will protect the designated uses for this waterbody. Any other criteria applicable to this waterbody remain in effect, including the nutrient criteria for parameters set out in 62-302.531(2)(b) F.A.C.

#### 4. Scientific Defensibility

*Section 131.11(b) provides that, in establishing criteria, states should establish numerical values based on 304(a) guidance, 304(a) guidance modified to reflect site-specific conditions, or other scientifically defensible methods.*

The FDEP used the TSI to determine that Lake Alfred, Lake Blue, and Lake Marianna were impaired for nutrients for the verified period in 2009 (Group 3, Cycle 2). The subsequent assessment in 2016 (Group 3, Cycle 3) indicated that the NNC were also not being met for Chla in all three lakes and for TP in Lake Blue. To establish the nutrient targets for Lake Alfred, Lake Blue, and Lake Marianna, the FDEP used the generally applicable 20 µg/L Chla criterion as a target because this level is considered protective of the designated use of these low color, high alkalinity lakes. See 62-302.531(2)(b), F.A.C. Long term datasets Lake Alfred, Lake Blue, and Lake Marianna suggest that they do not differ from the



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

population of lakes used in the development of the NNC. The site-specific criteria for each lake were derived from regression approaches and expressed as AGMs not to be exceeded in any year. The resulting water quality is expected to protect the designated uses for this waterbody.

**Assessment:** The EPA determined that the selection of a *Chla* value of 20 µg/L as the response variable target is appropriate and the technical approach to calculate the target TN and TP concentrations is scientifically sound. The approaches are described in the cited report.

### 5. Public Participation

*Section 131.20(b) provides that states shall hold a public hearing when revising WQS, in accordance with provisions of state law and the EPA's public participation regulation (40 CFR part 25). The proposed WQS revision and supporting analyses shall be made available to the public prior to the hearing.*

A public workshop was conducted by the FDEP on March 6, 2018, in Bartow, Florida, to obtain comments on the draft nutrient TMDLs for Lake Alfred, Lake Blue, and Lake Marianna. The workshop notice indicated that the nutrient TMDLs, if adopted, constitute site-specific numeric interpretations of the narrative criterion set forth in paragraph 62-302.530(48)(b), F.A.C., that would replace the otherwise applicable NNC in subsection 62-302.531(2), F.A.C., for these particular waters. The FDEP also held a public hearing on June 29, 2018, in Tallahassee, Florida.

**Assessment:** The FDEP has met the public participation requirements for this H1.

### 6. Certification by the State Attorney General

*Section 131.6(e) requires that the state provide a certification by the state Attorney General or other appropriate legal authority within the state that the WQS were duly adopted pursuant to state law.*

A letter from the FDEP General Counsel, Robert A. Williams, dated October 9, 2018, certified that the Lake Alfred, Lake Blue, and Lake Marianna TMDLs were duly adopted as WQS pursuant to state law.

**Assessment:** The FDEP has met the requirement for Attorney General certification for this H1.

### 7. Endangered Species Act Section 7 Consultation

*Section 7(a)(2) of the Endangered Species Act (ESA) requires federal agencies, in consultation with the Services, to ensure that their actions are not likely to jeopardize the continued existence of federally listed species or result in the destruction or adverse modification of designated critical habitat of such species.*

The existing default numeric nutrient criteria for the waterbody received concurrence by U.S. Fish and Wildlife Service (USFWS) on July 31, 2013. Because the site-specific criteria for TP in Lake Marianna and TN and TP in Lake Alfred and Lake Blue in this report are within the default criteria, an additional ESA section 7 consultation for this standards action is not required.

USFWS provided concurrence with the EPA's programmatic consultation on site-specific nutrient criteria for the FDEP on July 21, 2015, for any site-specific nutrient criteria that are more stringent than the existing default nutrient criteria in place in the State of Florida for the waterbody. Because the site-

## **EPA HIERARCHY 1 REVIEW DOCUMENT**

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

specific criteria in this report for TN in Lake Marianna are more stringent than the default criteria, an additional ESA section 7 consultation for this standards action is not required.

***Assessment:*** The EPA has met the ESA requirements for this action.



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

### II. TMDL Review

*Section 303(d) of the CWA and the EPA's implementing regulations at 40 CFR Part 130 set out the statutory and regulatory requirements for an approvable TMDL. The following information is generally necessary for the EPA to determine if a submitted TMDL fulfills the legal requirements for approval under section 303(d) and the EPA regulations and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation.*

#### 1. Description of Waterbody, Pollutant of Concern, and Pollutant Sources

*The TMDL analytical document must identify the waterbody as it appears on the state's 303(d) list, including the pollutant of concern. The TMDL submittal must include a description of the point and nonpoint sources of the pollutant of concern, including the magnitude and location of the sources. Where it is possible to separate natural background from nonpoint sources, a description of the natural background must be provided, including the magnitude and location of the source(s). Such information is necessary for the EPA's review of the load and wasteload allocations, which is required by regulation. The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as: (1) the assumed distribution of land use in the watershed; (2) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources; (3) present and future growth trends, if taken into consideration in preparing the TMDL; and (4) explanation and analytical basis for expressing the TMDL through surrogate measures, if applicable. Surrogate measures are parameters such as percent fines and turbidity for sediment impairments or chlorophyll a and phosphorus loadings for excess algae.*

Figure 1.1 of the report (reproduced as Figure 1 in this document) shows the location of the WBIDs in the basin and major geopolitical and hydrologic features in the region, and Figure 1.2 contains a more detailed map of the WBIDs. Lake Alfred is in the City of Lake Alfred in Polk County, in the Lake Hamilton Drainage Basin, which discharges to Peace Creek via Peace Creek Drainage Canal. Lake Marianna is in the City of Auburndale in Polk County and is connected to Lake Jessie, which is part of the Winter Haven Chain of Lakes which ultimately discharge to Peace Creek via Wahneta Farms Drainage Canal. Lake Blue located in unincorporated Polk County, is connected to Lake Cannon, which is also part of the Winter Haven Chain of Lakes. Section 2.3.3 of the report provides information on the impairment status of each lake. As mentioned in section I-3 of this document, the Group 3, Cycle 3 assessment in 2015 indicated that the numeric nutrient criteria were not being met for Chl<sub>a</sub> in all three lakes and for TP in Lake Blue.

Land use categories in the Lake Alfred, Lake Marianna, and Lake Blue Watersheds are tabulated in Tables 4.2, 4.3, and 4.4, respectively, of the report and show the percent watershed areas occupied by the lake, wetlands, and urban land uses—including residential, commercial, industrial, recreational, and open land and/or agricultural land. Human land uses, including medium- and high-density residential and urban and built-up were also included.

Section 4.2.1 of the report describes the wastewater point sources in the watersheds. There are two National Pollutant Discharge Elimination System (NPDES) permitted wastewater facilities in the Lake Marianna Watershed: UFP Auburndale, LLC (FL0133132) and Florida Brewery Inc. (FLA013273). UFP Auburndale, LLC is only authorized to discharge effluent and stormwater during extreme rain events from Outfall D-001 to Lake Ariana Drain (WBID 1501F) and Lake Ariana (WBID 1501B). Florida Brewery Inc. is not authorized to discharge effluent to surface water. No NPDES-permitted wastewater facilities that discharge directly to surface waters were identified in the Lake Alfred and Lake Blue Watersheds. The Municipal Separate Storm Sewer System (MS4) Permittees in the



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

watersheds are discussed in section 4.2.2. The stormwater collection systems in the Lake Alfred, Lake Marianna, and Lake Blue Watersheds, which are owned and operated by Polk County in conjunction with the Florida Department of Transportation (FDOT) District 1, are covered by an NPDES Phase I MS4 permit (FLS000015). The City of Lake Alfred is a co-permittee in the MS4 permit for the Lake Alfred Watershed, and the City of Auburndale is a co-permittee in the MS4 permit for the Lake Marianna and Lake Blue Watersheds. Nutrient loadings to Lake Alfred, Lake Marianna, and Lake Blue are primarily generated from nonpoint sources which are mainly loadings from surface runoff, groundwater seepage entering the lake, and precipitation directly onto the lake surface (atmospheric deposition).

**Assessment:** The EPA concludes that the FDEP has adequately identified the impaired waterbodies, the pollutants of concern, and the magnitude and location of the pollutant sources.

## 2. Description of the Applicable WQS and Numeric Water Quality Target

*The TMDL submittal must include a description of the applicable state WQS, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the statewide antidegradation policy. Such information is necessary for the EPA's review of the load and wasteload allocations which is required by regulation. A numeric water quality target for the TMDL (a quantitative value used to measure whether or not the applicable WQS is attained) must be identified. If the TMDL is based on a target other than a numeric water quality criterion, then a numeric expression, usually site-specific, must be developed from a narrative criterion and a description of the process used to derive the target must be included in the submittal.*

Section 2.2 of the report and section I-3 of this document provide details on the designated use of the waterbodies. To establish the nutrient targets for the lakes, the FDEP used the generally applicable 20 µg/L Chl<sub>a</sub> criterion as a target because this level is considered protective of the designated use of these low color, high alkalinity lakes. Long-term datasets of color, alkalinity, and nutrients in these lakes suggested that they do not differ from the population of lakes used in the development of the NNC, and therefore the FDEP determined that the generally applicable NNC are the most appropriate site-specific Chl<sub>a</sub> criteria for these lakes.

Site-specific TN and TP targets for the TMDLs were identified using a regression approach to relate lake TN and/or TP loads to AGM Chl<sub>a</sub> levels. It was determined that TN of 1.69 mg/L for Lake Alfred, 1.00 mg/L for Lake Marianna, and 1.16 mg/L for Lake Blue, would result in a Chl<sub>a</sub> target of 20 µg/L. The site-specific TP criteria for Lake Alfred and Lake Marianna is the same as the lower end of the range of the generally applicable NNC values, which is 0.03 mg/L for low color, high alkalinity lakes. For Lake Blue, the method used for determining the TP target consisted of (a) the development of regression equations that relate the lake TN and TP concentrations to AGM Chl<sub>a</sub> levels, and (b) the evaluation of paleolimnological results to refine the water quality target for TP consistent with predisturbance conditions. The detailed process for developing the water quality targets is explained in Chapters 3 and 5 of the TMDL report and is also summarized in section I-3 of this document.

**Assessment:** The EPA concludes that the FDEP has properly addressed its WQS when setting a numeric water quality target.



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

### 3. Loading Capacity - Linking Water Quality and Pollutant Sources

*As described in the EPA guidance, a TMDL identifies the loading capacity of a waterbody for a particular pollutant. The EPA regulations define loading capacity as the greatest amount of loading that a water can receive without violating WQS (40 CFR section 130.2(f)). The loadings are required to be expressed as either mass-per-time, toxicity or other appropriate measure (40 CFR section 130.2(i)). The TMDL submittal must identify the waterbody's loading capacity for the applicable pollutant and describe the rationale for the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In most instances, this method will be a water quality model. Supporting documentation for the TMDL analysis must also be contained in the submittal, including the basis for assumptions, strengths and weaknesses in the analytical process, results from water quality modeling, etc. Such information is necessary for the EPA's review of the load and wasteload allocations which is required by regulation.*

*In many circumstances, a critical condition must be described and related to physical conditions in the waterbody as part of the analysis of loading capacity (40 CFR section 130.7(c)(1)). The critical condition can be thought of as the "worst case" scenario of environmental conditions in the waterbody in which the loading expressed in the TMDL for the pollutant of concern will continue to meet WQS. Critical conditions are the combination of environmental factors (e.g., flow, temperature, etc.) that results in attaining and maintaining the water quality criterion and has an acceptably low frequency of occurrence. Critical conditions are important because they describe the factors that combine to cause a violation of WQS and will help in identifying the actions that may have to be undertaken to meet WQS.*

The TMDL development process identifies nutrient target concentrations and nutrient reductions for each lake necessary for the waterbody to achieve the applicable nutrient water quality criteria, and to maintain its function and designated use as a Class III Freshwater lake. Lake Alfred, Lake Marianna, and Lake Blue are expected to meet the applicable nutrient criteria and maintain their function and designated use as Class III waters when surface water nutrient concentrations are reduced to the target concentrations, addressing anthropogenic contributions to the water quality impairment. The approaches used to establish the nutrient target and the TMDL, address meeting the Chl<sub>a</sub> target which is protective of the lakes' designated use.

The primary focus in the development of this TMDL was to maintain the lakes' AGM Chl<sub>a</sub> values at or below the target concentration of 20 µg/L through reductions in nutrient inputs to the system. Nutrient reductions are also expected to improve dissolved oxygen (DO) levels in the lake. For addressing nonpoint sources (both NPDES stormwater discharges and non-NPDES stormwater discharges), the TMDLs are expressed as percent reductions in the existing lake TN and TP concentrations necessary to meet the applicable Chl<sub>a</sub> target, while taking into consideration the estimated predisturbance conditions in the lake.

For Lake Alfred, Lake Marianna, and Lake Blue, the existing lake nutrient conditions evaluated for establishing the TMDL were the maximum AGM value of TN or TP concentrations measured from 2003 to 2016 and presented in Table 5.1. The use of the maximum geometric mean value in setting the TMDL was considered a conservative assumption for establishing reductions, as this would ensure that all exceedances of the target are addressed.

The equation used to calculate the percent reduction is as follows:

$$\frac{[\text{measured exceedance} - \text{target}] \times 100}{\text{measured exceedance}}$$



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

In the equation, the measured exceedance is the maximum TN (or TP) AGM value. For Lake Alfred, to achieve the target concentration of 1.69 mg/L from the maximum TN value of 2.00 mg/L, a 16% reduction in the lake TN concentration is necessary. For Lake Marianna, to achieve the target concentration of 1.00 mg/L from the maximum TN value of 1.79 mg/L, a 44% reduction in the lake TN concentration is necessary. Since no TP impairment was found in Lake Alfred and Lake Marianna, the TP reduction was assigned as 0%.

For Lake Blue, to achieve the target concentration of 1.16 mg/L from the maximum TN value of 3.45 mg/L, a 66% reduction in the lake TN concentration is necessary. To achieve the target concentration of 0.03 mg/L from the maximum TP value of 0.09 mg/L, a 67% reduction in the lake TP concentration is necessary. The nutrient TMDL value, which is expressed as an AGM, addresses the anthropogenic nutrient inputs contributing to the exceedances of the *Chla* restoration target.

As mentioned in Appendix A-2 of the report, the water quality results applied in the analysis spanned the 1999–2016 period, which included both wet and dry years. The annual average rainfall for 1999 to 2016 was 49.2 inches/year. The years 2000, 2006, and 2007 were dry years; 2009 to 2011 were average years; and 2002, 2004, 2005, and 2015 were wet years. Thus, consideration of both wet and dry years addresses nutrient loading from extreme storm water runoff events.

**Assessment:** The EPA concludes that the loading capacity, having been calculated using the EPA-reviewed water quality models, and using observed concentration data and water quality targets consistent with numeric water quality criteria, has been appropriately set at a level necessary to attain and maintain the applicable WQS. The H1 is based on a reasonable approach for establishing the relationship between pollutant loading and water quality.

### 4. Load Allocation (LA)

*The EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity allocated to existing and future nonpoint sources and to natural background (40 CFR section 130.2(g)). Load allocations may range from reasonably accurate estimates to gross allotments (40 CFR section 130.2(g)). Where it is possible to separate natural background from nonpoint sources, load allocations should be described separately for background and for nonpoint sources.*

*If the TMDL concludes that there are no nonpoint sources and/or natural background, or the TMDL recommends a zero load allocation, the LA must be expressed as zero. If the TMDL recommends a zero LA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero LA implies an allocation only to point sources will result in attainment of the applicable WQS, and all nonpoint and background sources will be removed.*

Section 6.2 of the report discusses load allocation necessary to achieve the lake nutrient targets. A 16% reduction in the current TN load is required for Lake Alfred (WBID 1488D), a 44% reduction in current TN load is needed for Lake Marianna (WBID 1521L), and reductions in current TN and TP loads of 66% and 67%, respectively, are required for Lake Blue (WBID 1521Q). The percent reductions represent the generally needed total nitrogen and total phosphorus reductions from all sources; including stormwater runoff, groundwater contributions, and septic tanks. Although the TMDLs are based on the percent reductions from all sources to the lakes, the FDEP does not intend to abate natural conditions. The needed reduction from anthropogenic inputs would be calculated based on more detailed source information when a restoration plan was developed. The FDEP expects the reductions in nonpoint



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

source nutrient loads to also result in reduced sediment nutrient flux, which is commonly a factor in lake eutrophication. The report also clarifies that the LA may include loads from stormwater discharges regulated by the FDEP and the water management district that are not part of the NPDES Stormwater Program.

**Assessment:** The EPA concludes that the LAs provided in the TMDL report are reasonable and will result in attainment of the WQS.

### 5. Wasteload Allocation (WLA)

*The EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to existing and future point sources (40 CFR section 130.2(h)). If no point sources are present or if the TMDL recommends a zero WLA for point sources, the WLA must be expressed as zero. If the TMDL recommends a zero WLA after considering all pollutant sources, there must be a discussion of the reasoning behind this decision, since a zero WLA implies an allocation only to nonpoint sources and background will result in attainment of the applicable WQS, and all point sources will be removed.*

*In preparing the WLAs, it is not necessary that each individual point source be assigned a portion of the allocation of pollutant loading capacity. When the source is a minor discharger of the pollutant of concern or if the source is contained within an aggregated general permit, an aggregated WLA can be assigned to the group of facilities. However, it is necessary to allocate the loading capacity among individual point sources as necessary to meet the WQS.*

*The TMDL submittal should also discuss whether a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur. In such cases, the state will need to demonstrate reasonable assurance that the nonpoint source reductions will occur within a reasonable time.*

Section 6.3 of the report mentions that no continuous NPDES-permitted wastewater discharges were identified in the Lake Alfred, Lake Marianna, and Lake Blue Watersheds. The stormwater collection systems in the watersheds, which are owned and operated by Polk County in conjunction with FDOT District 1, are covered by an NPDES Phase I MS4 permit (FLS000015). The City of Lake Alfred is a co-permittee in the MS4 permit for the Lake Alfred Watershed. The City of Auburndale is a co-permittee in the MS4 permit for the Lake Marianna and Lake Blue Watersheds. The MS4 permittees may be responsible for a 16% reduction in TN from the current anthropogenic loading in the Lake Alfred Watershed, and a 44% reduction in the current TN anthropogenic loading in the Lake Marianna Watershed. Likewise, the MS4 permittees may be responsible for a 66% reduction in TN and a 67% reduction in TP from the current loading in the Lake Blue Watershed.

**Assessment:** The EPA concludes that not providing WLAs in the TMDL report is reasonable since there are no continuous NPDES permitted (domestic or industrial) wastewater discharges to Lake Alfred, Lake Marianna, or Lake Blue and no stormwater systems requiring an NPDES stormwater permit.

### 6. Margin of Safety (MOS)

*The statute and regulations require that a TMDL include a margin of safety to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA section 303(d)(1)(C), 40 CFR section 130.7(c)(1)). EPA 1991 guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the*



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

*MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.*

The document stated that an implicit MOS was used in the development of these TMDLs because of the conservative assumptions that were applied. Percent reductions were determined by using the maximum AGMs of TN concentrations as existing condition, which is considered a conservative assumption for establishing reductions as this will address all exceedances of the TN target.

**Assessment:** The EPA concludes that the H1 incorporates an adequate margin of safety.

### 7. Seasonal Variation

*The statute and regulations require that a TMDL be established with consideration of seasonal variations. The method chosen for including seasonal variations in the TMDL must be described (CWA section 303(d)(1)(C), 40 CFR section 130.7(c)(1)).*

The water quality data used in the analysis spanned the 1999–2016 period, including all seasons and a full range of flow and meteorological conditions that included both wet and dry years. The years 2000, 2006, and 2007 were dry years; 2009 to 2011 were average years; and 2002, 2004, 2005, and 2015 were wet years. Additionally, as prescribed in paragraph 62-302.531(6), F.A.C., to calculate an AGM for TN, TP, or Chl<sub>a</sub>, there must be at least four temporally independent samples per year taken at least one week apart with at least one sample taken between May 1 and September 30 and at least one sample taken during the other months of the calendar year. This would ensure that seasonal variations throughout the year are considered in developing the TMDL. The report clarifies that the estimated assimilative capacity was based on annual conditions rather than on critical/seasonal conditions for three reasons: the methodology used to determine assimilative capacity for nutrients does not lend itself very well to short-term assessments; the FDEP was generally more concerned with the net change in overall primary productivity in the segments, which is better addressed on an annual basis; and the methodology used to determine impairment was based on annual conditions.

**Assessment:** The EPA concludes that seasonal variations were considered and that the H1 allocations ensure protection of WQS throughout all seasons.

### 8. Monitoring Plan to Track TMDL Effectiveness

*EPA's 1991 document, Guidance for Water Quality-Based Decisions: The TMDL Process (EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur. Such a TMDL should provide assurances that nonpoint source controls will achieve expected load reductions, and such a TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDLs are occurring and leading to attainment of WQS.*

The Southwest Florida Water Management District (SWFWMD), Polk County, and the FDEP conduct routine monitoring of Lake Alfred, Lake Marianna, and Lake Blue. Other organizations like the U.S. Geological Survey and Florida LakeWatch have conducted monitoring intermittently for short periods. The data collected through these monitoring activities will be used to evaluate the effect of best



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/

Peace River Basin – Nutrients

management practices (BMPs) implemented in the watersheds on lake TN and TP loads in subsequent water quality assessment cycles.

**Assessment:** Although not a required element of the EPA's TMDL approval process, the FDEP indicated that several stakeholders would be carrying out monitoring activities, which would help to gauge the progress toward attainment of the WQS. The EPA is taking no action on the monitoring plan.

### 9. Implementation Plans

*On August 8, 1997 Bob Perciasepe (EPA Assistant Administrator for the Office of Water) issued a memorandum, "New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs)," that directs Regions to work in partnership with states to achieve nonpoint source load allocations established for 303(d)-listed waters impaired solely or primarily by nonpoint sources. To this end, the memorandum asks that Regions assist states in developing implementation plans that include reasonable assurances that the nonpoint source load allocations established in the TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. The memorandum also includes a discussion of renewed focus on the public participation process and recognition of other relevant watershed management processes used in the TMDL process. Although implementation plans are not approved by the EPA, they help establish the basis for the EPA's approval of the TMDL.*

The TMDL document explains how the information provided in the TMDL report will be used to implement restoration activities in the basin. Following the adoption of a TMDL, implementation takes place through specific requirements in NPDES wastewater and MS4 permits and, as appropriate, through local or regional water quality initiatives or through Basin Management Action Plans (BMAPs).

Section 7.3 of the report indicates that the FDEP is working with Polk County Public Works, the City of Lake Alfred, the City of Auburndale, businesses, and other stakeholders to undertake reductions in the discharge of pollutants and achieve the established TMDLs for Lake Alfred, Lake Marianna, and Lake Blue. Polk County, SWFWMD, LakeWatch, and the FDEP have already been actively involved in data collection and analysis.

**Assessment:** Although not a required element of the TMDL approval, the FDEP discussed how information derived from the TMDL analysis process will be used to develop PLRGs and implement BMPs that support implementation of the TMDL. The EPA is taking no action on the implementation portion of the submission.

### 10. Reasonable Assurances

*EPA guidance calls for reasonable assurances when the TMDL is developed for waters impaired by both point and nonpoint sources. In a water impaired by both point and nonpoint sources, where a point source is given a less stringent wasteload allocation based on an assumption that nonpoint source load reductions will occur, reasonable assurance that the nonpoint source reductions will happen must be explained in order for the TMDL to be approvable. This information is necessary for the EPA to determine that the load and wasteload allocations will achieve WQS.*

*In a waterbody impaired solely by nonpoint sources, reasonable assurances that load reductions will be achieved are not required in order for a TMDL to be approvable. However, for such nonpoint source-only waters, states are strongly encouraged to provide reasonable assurances regarding achievement of load allocations in the implementation plans described in section 9, above. As described in the August 8, 1997 Perciasepe memorandum, such reasonable assurances should be included in state implementation plans and "may be non-regulatory, regulatory, or incentive-based, consistent with applicable laws and programs."*



## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

The TMDL document explains how the information provided in the report will be used to implement restoration activities in the basin. The effectiveness of restoration activities will depend heavily on the active participation of the SWFWMD, local governments, businesses, and other stakeholders. FDEP plans to work with these organizations and individuals to undertake or continue reductions in the discharge of pollutants and achieve the established TMDLs for impaired waterbodies. As stated in section II-9 above, a number of these stakeholders have already been actively involved in data collection and analysis and participated in meetings related to this TMDL development, which is a good indication of their interest and commitment in restoring the three lakes.

**Assessment:** The EPA considered the reasonable assurances contained in the report. Point sources are required to comply with their NPDES permits, which must include the requirements and assumptions of the H1. Reductions for nonpoint sources are expected to occur as a result of the incentive and voluntary programs that were already in place or may be developed as part of the BMAP with active participation of its stakeholders.

### 11. Public Participation

*EPA policy is that there must be full and meaningful public participation in the TMDL development process. Each state must, therefore, provide for public participation consistent with its own continuing planning process and public participation requirements (40 CFR section 130.7(c)(1)(ii)). In guidance, the EPA has explained that the final TMDL submitted to the EPA for review and approval must describe the state's public participation process, including a summary of significant comments and the state's responses to those comments. When the EPA establishes a TMDL, EPA regulations require the EPA to publish a notice seeking public comment (40 CFR section 130.7(d)(2)).*

*Inadequate public participation could be a basis for disapproving a TMDL; however, where the EPA determines that a state has not provided adequate public participation, the EPA may defer its approval action until adequate public participation has been provided for, either by the state or by the EPA.*

A Technical Public Meeting to present the general TMDL approach for Lake Alfred, Lake Blue, and Lake Marianna was held on November 8, 2017. The FDEP published a Notice of Development of Rulemaking on February 21, 2018, to establish the TMDLs for impaired waters in the Peace River Basin. A rule development public workshop for the TMDLs was held on March 6, 2018, in Bartow, Florida, which was advertised in the local newspapers, 'The Ledger' and 'News Chief' of Polk County and a 30-day public comment period was provided to the stakeholders. The workshop notice indicated that the nutrient TMDLs, if adopted, constitute site-specific numeric interpretations of the narrative criterion set forth in paragraph 62-302.530(48)(b), F.A.C., that would replace the otherwise applicable NNC in subsection 62-302.531(2), F.A.C., for these waters. Public comments were received for the TMDLs and FDEP affirmed that the department had carefully reviewed the stakeholder concerns and made clarifications and revisions, as appropriate in the TMDL report. The FDEP also held a public hearing regarding rule development on June 29, 2018, in Tallahassee, Florida.

### 12. Submittal Letter

*A submittal letter should be included with the TMDL analytical document and should specify whether the TMDL is being submitted for a technical review or is a final submittal. Each final TMDL submitted to the EPA must be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under section 303(d) of the CWA for EPA review and approval. This clearly establishes the state's intent to submit, and the EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final submittal, should contain such information as the name and location of the waterbody and the pollutant(s) of concern.*



## **EPA HIERARCHY 1 REVIEW DOCUMENT**

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

**Assessment:** Accompanying the State's (October 2018) final TMDLs for nutrients was a submittal letter dated October 9, 2018, from Robert A. Williams General Counsel, the FDEP, requesting the review and approval of the nutrient TMDLs for: Lake Tallavana, Lake Hollingsworth, Lake Haines, Lake Rochelle, Lake Conine, Lake Alfred, Lake Blue, Lake Marianna, Lake Ariana, and Eagle Lake.

## EPA HIERARCHY 1 REVIEW DOCUMENT

Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/  
Peace River Basin – Nutrients

### III. Conclusion

The Water Protection Division is **APPROVING** the H1 NNC and TMDLs addressed by this decision document in accordance with sections 303(c) and 303(d) of the CWA, as consistent with the CWA and 40 CFR parts 131 and 130, respectively.

The H1 NNC presented in this decision document will constitute the site-specific numeric interpretation of the narrative nutrient criterion set forth in paragraph 62-302.530(48)(b), F.A.C., that will replace the otherwise applicable numeric criteria for TN and TP in subsection 62-302.531(2) for this particular water, pursuant to paragraph 62-302.531(2)(a)1.b., F.A.C. Based on the chemical, physical, and biological data presented in the development of the H1 NNC outlined above, the EPA concludes that the revised NNC for TN and TP provide for and protect healthy, well-balanced, biological communities in the waters to which the NNC apply and are consistent with the CWA and its implementing regulations at 40 CFR 131.11.

Therefore, the site-specific nutrient criteria for Lake Alfred (WBID 1488D) for TN is 1.69 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1488D is expressed as a percent reduction of 16% for TN and 0% for TP.

The site-specific Lake Blue (WBID 1521Q) criteria for TN is 1.16 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521Q is expressed as a percent reduction of 66% for TN and 67% for TP.

The site-specific Lake Marianna (WBID 1521L) criteria for TN is 1.00 mg/L and TP is 0.03 mg/L, both expressed as an AGM not to be exceeded in any year. The TMDL allocation for WBID 1521L is expressed as a percent reduction of 44% for TN and 0% for TP.

All other criteria applicable to these waterbodies remain in effect, including other applicable criteria at 62-302.531(2)(b), F.A.C. The requirements of paragraph 62-302.530(48)(a), F.A.C. also remain applicable.

Furthermore, after a full and complete review, the EPA finds that the H1 for Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)/Peace River Basin for TN, TP, and Chla satisfies all of the elements of approvable TMDLs. This approval is for the *Nutrient TMDLs for Lake Alfred (WBID 1488D), Lake Blue (WBID 1521Q), and Lake Marianna (WBID 1521L)*, addressing three waterbodies for use impairments due to nutrients based on elevated TN and/or TP.